

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
690 Walnut Ave. St. 150  
Vallejo, CA 94592-1133  
(707) 649-5453  
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-004951**Date Inspected:** 07-Dec-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Sun Wei**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Tower**Summary of Items Observed:**

The Quality Assurance (QA) Inspector Gregory Bertlesman arrived on site at the Zhenhua Port Machinery Company facility on Changxing island, China to periodically monitor welding and Quality Control functions. While on site the Quality Assurance Inspector observed and/or discovered the following.

**West Shaft, Skin A, Lift 1**

The Quality Assurance Inspector observed ZPMC performing in process welding of the complete joint penetration weld joining the longitudinal stiffeners to skin plate. The skin plate is on a jig to allow the four ZPMC welders to weld in the flat position. The welders were utilizing the flux cored arc welding process.

**East Shaft, Skin A, Lift 2**

The Quality Assurance Inspector observed ZPMC performing fit up and tack welding operations of diaphragm plates 59M, 62M, and 71M to skin A. The welders were utilizing the shielded metal arc welding process to produce the tack welds in the horizontal position.

**East Shaft, Lift 1**

The Quality Assurance Inspector observed ZPMC surveying personnel surveying the shaft in the rotating device. ZPMC was also observed assembling scaffolding to either end of the shaft for access.

**North Shaft, Skin A, Lift 1**

The Quality Assurance Inspector observed ZPMC performing in process welding of the partial joint penetration weld joining the longitudinal stiffeners to skin plate on the semi automated flux cored arc welding gantry system. The skin plate has numerous jacks on the part in an effort to minimize distortion from the welding. ZPMC Quality

---

## WELDING INSPECTION REPORT

( Continued Page 2 of 2 )

---

Control was present monitoring the welding in accordance with WPS-B-T-2332-Tc-P5-F.

East Shaft, Skin D, Lift 2

The Quality Assurance Inspector performed a visual verification of the East Shaft, Skin D, Lift 2, for the ABF internal green tagging system. It was observed that ZPMC is continuing to grind undercut up to a millimeter even though AWS D1.5 states undercut shall be repaired by welding. Assistant Structures Materials Representative Josh Ishibashi is aware of the issue and has instructed the Quality Assurance inspectors to find the issue compliant as long as it is not ground over a millimeter. The Quality Assurance Inspector observed numerous areas that were non compliant and ZPMC immediately repaired the discrepancies. The Quality Assurance Inspector signed the green tag paperwork and logged the progress in an on-site for future review.

### Summary of Conversations:

As stated in the contents of the above report.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Josh Ishibashi 1.376.647.10411, who represents the Office of Structural Materials for your project.

---

<b>Inspected By:</b>	Bertlesman,Greg	Quality Assurance Inspector
<b>Reviewed By:</b>	Wright,Mark	QA Reviewer

---